Subject Area: Infectious Disease/Chronic Disease

Assignment Description

The CSTE Fellow will be housed in the HIV/AIDS Surveillance Section directed by Dr. Jane Kelly and will have a joint assignment with the Chronic Diseases, Healthy Behaviors and Injury Epidemiology (CHIE) Section directed by Rana Bayakly. The goals of these sections are to optimize the health of Georgians by assessing, monitoring, evaluating and preventing chronic diseases and HIV/AIDS and related risk behaviors by using epidemiological methods to:

1. Conduct HIV/AIDS and newly diagnosed cancer surveillance

2. Identify and respond to cancer inquiries and/or cancer clusters

3. Provide support to local and district public health and private partners in identifying training and resources needs developing guidelines for and investigating increases in rates of disease, developing educational and training materials and collecting and disseminating data.

4. Publish and disseminate public health information: epidemiological and statistical reports, annual data summaries and educational materials

5. Participate in emergency preparedness planning, response and recovery efforts.

The HIV/AIDS surveillance section is compromised of three HIV Epidemiology Teams: HIV Core Surveillance, the Medical Monitoring Project (MMP) and the National HIV Behavioral Surveillance (NHBS) team. In addition, HIV Epidemiology plays a strong role in providing data, analysis, and support for geospatial mapping for the CAPUS (Care and Prevention in the US) HIV project and to the HIE (Health Information Exchange) project which endeavors to identify out-of-care HIV patients to re-engage them in care. The Fellow would have opportunity to work with any of these programs. The CHIE section is compromised of several chronic-disease specific surveillance teams: Georgia Comprehensive Cancer Registry, Breast and Cervical Screening Program, Stroke BRFSS, YRBS, ATS, YTS School Health Profiles, Trauma, and the Georgia Violent Death Reporting System.

Day-to-Day Activities

The CSTE Fellow will be housed in the HIV/AIDS and the Chronic Diseases, Healthy Behaviors and Injury Epidemiology Section (CHIE) in the Epidemiology Program. HIV/AIDS surveillance is directed by Dr. Jane Kelly (Primary Mentor) while the CHIE is directed by Rana Bayakly (Secondary Mentor.) HIV/AIDS and CHIE are two sections of four Sections in the Epidemiology Program; the other sections are STD epidemiology and Acute Disease Epidemiology (ADES.)

The goal of the Epidemiology Program as well as the HIV/AIDS surveillance and CHIE Section is to optimize the health of Georgians is by preventing and mitigating certain notifiable infectious and chronic diseases. The Epidemiology Program addresses this goal by using epidemiologic methods to: Conduct surveillance on infectious diseases and certain chronic diseases such as cancer; identify and respond to

emerging infectious disease threats; provide support to local and public health and private partners in identifying training and resource needs, developing guidelines for investigating outbreaks or increase in endemic rates of disease, developing educational and training materials, and collecting and disseminating data; publish and disseminate public health information; statistical reports (e.g. Georgia Epidemiology Report), outbreak investigation reports, annual data summaries, and educational materials; and participate in emergency preparedness planning, response and recovery efforts.

The CHIE section is compromised of several surveillance teams: Behavioral Surveillance, Chronic Disease, and Registry team, while the HIV/AIDS surveillance is compromised of the core surveillance team, MMP and the NHBS team. The CSTE fellow will have a range of project opportunities in each of these areas. The CHIE has 1 doctoral level epidemiologists, 3 epidemiologists enrolled in a doctoral level studies, and 7 very experienced master-level epidemiologists, 2 data managers and numerous support staff. The HIV/AIDS surveillance has a large diverse staff of senior and junior epidemiologists, data managers, SAS programmers, and field staff directly interacting with persons living with HIV as outlined above. The Fellow will be given the opportunity to select projects with which to participate based on interest and time availability. These activities could include:

1. In depth ongoing monitoring and evaluation of CAPUS project using geospatial mapping tools

2. Analysis of the HIV Care Continuum for disparity populations

3. Analysis of MMP data with linkage to eHARS data to examine longitudinal HIV care and viral suppression

4. Direct interaction through patient interviews with persons living with HIV through MMP

5. Direct interaction with persons at increased risk for HIV (e.g., MSM and IDU) through interviews with NHBS.

6. Experience with public health informatics with technical infrastructure development for HIE

7. Opportunity to present findings at professional meetings but also to the lay community, HIV community-based organizations, HIV care advocates through presentations, posters, Fact Sheets and/or website development

Additionally the CSTE fellow will participate in:

1. numerous field outbreak investigation through the ADES team.

2. As one of only 10 Emerging Infectious Program (EIP) sites in the United States, the CSTE fellow would have the opportunity to conduct Georgia-specific epidemiologic analysis for Emerging Infectious Program (EIP) datasets if interested;

3. CSTE fellow may participate in a four week rotation at the District Health Office and work closely with the District Epidemiologist on disease surveillance, individual case follow-up, and/or data analysis activities.

Strength of Georgia Assignment: Very experienced epidemiologic leadership, CDC Emerging Infectious Program Site, Gold Certified Cancer Registry (10 out of 11 years), and opportunity to work on a broad range of projects. Physical proximity to CDC offers numerous other investigation and training opportunities.

Potential Projects

HIV/AIDS surveillance in Georgia is a reportable disease to the Georgia Department of Public Health since 2004, health care facilities, provider, and laboratories report data on a regular basis, previous to 2004 HIV/AIDS was reportable on a voluntary basis. Data are merged, edited and analyzed regularly to describe population at high risk, identify trends of public health concerns and identifying geographic area for intervention. Cancer is also a reportable disease in Georgia since 1995. All health care facilities, physicians, independent pathology laboratories and treatment centers report data on a monthly basis to the Georgia Comprehensive Cancer Registry (GCCR). GCCR completeness, timeliness and accuracy are evaluated yearly by the North American Association of Central Cancer Registries (NAACCR), the Centers for Disease Control and Prevention, National Program for Cancer Registries (NPCR) and the National Cancer Institute, Surveillance Epidemiology and End Results (SEER.) GCCR data received Gold certification for years 2000 to 2010 except for 2009 GCCR received Silver certification from NAACCR.

Data collected in both registries include demographics, clinical information, and treatment information. In case of HIV/AIDS surveillance CD4 counts and Viral Load is recorded.

The CSTE fellow will work on linking the HIV/AIDS surveillance data with the GCCR from 2000 to 2011 using LinkPlus software to create a linked data file that includes HIV/AIDS patients and cancer. CSTE fellow will review linked data sets and identify HIV/AIDS patients that were reported to the GCCR but were not reported to the HIV/AIDS surveillance program as well as identify cancer patients that were reported to HIV/AIDS but not to the GCCR.

CSTE fellow will have the opportunity to work with the GCCR five regional coordinators and the facilities identified to request data reported to the GCCR as well as work with HIV/AIDS provider to report any of the missed cases.

Once all records were reported, CSTE fellow will analyze the newly created HIV/AIDS with cancer data file and produce report on the Picture of HIV/AIDS patients with cancer, cancer incidence rate by sex, race, stage of disease, and geographic location will be analyzed, this will also give the opportunity for the CSTE fellow to geocode the newly created file and identify any cluster or area of public health concern.

CSTE fellow can also analyze data for any specific cancer of interest or looking at pattern of care for cancer patient living and or diagnosed with HIV/AIDS in Georgia.

CSTE fellow will have the opportunity to work with Academic researchers that are currently interested in the project to further develop research questions.

In addition to the main project described above the CSTE fellow will have several opportunity to chose from these are the following: analyze the Georgia School Health Profile, this is a survey on health policies implemented at public middle and high schools in Georgia. DPH will be conducting the survey in 2014 with 300 public middle schools principal and 300 public high schools principals as well as 600 lead health educators in both Georgia public middle and high school. The 2014 data will be available for analysis in September 2014 for the first time in Georgia, policies include tobacco use, nutrition, physical activities as well as sexual education and intervention. At minimum CSTE fellow will analyze at the implementation of the policies and concordance with recommended guidelines.

CSTE fellow will have the opportunity to work with the Youth Risk Behavior Survey (YRBS) coordinator to add, revise and create the 2015 YRBS survey, work with the Georgia Department of Education (DOE) on possibly adding sexual behavior questions for the first time in Georgia and to conduct the 2015 YRBS in randomly selected middle and high schools in Georgia. 2015 YRBS data will be collected from January 2015 to May 2015, data will be available for analysis in September 2015.

The CSTE fellow will have the opportunity to select from a variety of projects related to Chronic Diseases and injury and utilize variety of databases such as the BRFSS, ATS, YTS, GA Violent Death Reporting System, Georgia Stroke Coverdell Registry as well as Trauma Registry.In addition to access to the HIV/AIDS various databases such as the eHARS, MMP and NHBS databases mentioned earlier, the Fellow will have access to data collected through CAPUS activities that is captured in CAREWare (a database maintained by Ryan White clinics) and/or directly collected by CAPUS through the community based organizations they fund for HIV outreach. Georgia is at the leading edge of jurisdictions who have produced an HIV Care Continuum at the state and MSA level stratified by sex, race, age and transmission category. We encourage further exploration of disparities in care using this tool to examine sub-populations, e.g., young Black MSM and can support the CSTE Fellow in these analyses.

CSTE fellow will be located within the epidemiology program where they will have access to other infectious disease, sexually transmitted diseases as well as food borne disease.

Preparedness Role

Syndromic surveillance is a strategy used by the Georgia Department of Public Health for early event detection and to monitor the health of communities. It uses “pre diagnostic” information, such as chief complaints from people seeking acute care to identify emerging trends of public health concern. The

data are grouped into syndromes based on the patient's symptoms and statistical algorithms are run to identify unusual temporal and geographic patterns that might indicate situations of concern. In Georgia, syndromic surveillance is used to monitor the level of influenza-like illness during flu season, illnesses and injuries associated with major storms and natural disasters, and emerging outbreaks in the community.

The CSTE Fellow will work closely with the Director of Epidemiology Preparedness to evaluate the completeness and timeliness of syndromic surveillance data for priority syndromes such as Influenza-like illness (ILI) electronically from emergency departments, urgent care centers, and inpatient settings in Georgia to meet the meaningful use Stage 2 standards.

Assignment Location:	Georgia Department of Public Health Atlanta, GA
Primary Mentor:	Jane Kelly, MD Director, HIV/AIDS Surveillance Program Georgia Department of Public Health
Secondary Mentor:	A. Rana Bayakly, MPH Chronic Disease Epidemiology Director Georgia Department of Public Health